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## METHODS OF POPULATING DATA STRUCTURES FOR USE IN EVOLUTIONARY SIMULATIONS

### ABSTRACT OF THE DISCLOSURE

In particular, this invention provides novel methods of populating data  
5 structures for use in evolutionary modeling. In particular, this invention provides methods of  
populating a data structure with a plurality of character strings. The methods involve  
encoding two or more a biological molecules into character strings to provide a collection of  
two or more different initial character strings; selecting at least two substrings from the pool  
of character strings; concatenating the substrings to form one or more product strings about  
10 the same length as one or more of the initial character strings; adding the product strings to a  
collection of strings; and optionally repeating this process using one or more of the product  
strings as an initial string in the collection of initial character strings.

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